

TRANSMISSION SHEAR GRATING IN CHECKERBOARD
CONFIGURATION FOR EUV WAVEFRONT SENSOR

ABSTRACT OF THE DISCLOSURE

A wavefront measurement system includes a source of electromagnetic radiation. An imaging system directs the electromagnetic radiation at an object plane that it uniformly illuminates. A first grating is positioned in the object plane to condition the radiation entering the input of a projection optic. A projection optical system projects an image of the first grating onto the focal plane. A second grating is positioned at the focal plane that receives a diffracted image of the object plane to form a shearing interferometer. A CCD detector receives the image of the pupil of the projection optical system through the projection optical system and the second grating that forms a fringe pattern if there are aberrations in the projection optical system. Phaseshift readout of fringe pattern can be accomplished by stepping the first grating in a lateral direction and reading each frame with the CCD detector.

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